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**NOTICE OF ALLOWANCE AND ISSUE FEE DUE**

LM32/0930

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APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
03/884,411	06/27/97	058	DASTOURI, M	2723 09/30/99
First Named Applicant	EDGE,	35 USC 154(b) term ext. = 0 Days.		

TITLE OF INVENTION CHARACTERIZATION OF COLOR IMAGING SYSTEMS

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2 436231US01	382-16	1000	041 UTILITY	NO	\$1210.00	12/30/99

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

**I. Review the SMALL ENTITY status shown above.**

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

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- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

**II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.**

**III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.**

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
05/034,411	05/27/97	EDGE	4552310301

LM32/0930

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EXAMINER
DASTOURI, M

ART UNIT	PAPER NUMBER
2723	

DATE MAILED: 09/30/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

## Notice of Allowability

Application No.  
08/884,411

Applicant(s)  
Edge et al

Examiner  
Mehrdad Dastouri

Group Art Unit  
2723



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to amendment filed on August 12, 1999

☒ The allowed claim(s) is/are 1-5, 7-18, 20-22, 25-38, and 41-64

☐ The drawings filed on \_\_\_\_\_ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☒ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 7.

☐ including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

### Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

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## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed, August 12, 1999, has been entered and made of record.
2. 35 USC §112 rejection of Claim 22 has been withdrawn in view of the amendment of Claim 22 to depend from Claim 18 (in lieu of the canceled Claim 19) in the Applicant's amendment.
3. Rejection of Claims 1, 11, 17, 18, 27, and 57 under obvious-type double patenting has been withdrawn in view of Applicant's remarks.
4. Applicants' arguments have been fully considered. In view of the Applicants' arguments, cancellation of Claim 23, and amendment to Claims 1, 8, 17, 18, 22, 34, 49, 57 and 58, rejection of Claims 1-5, 7-11, 14, 16-18, 20-22, 25-27, 30, 32-38, 41-43, 46, 48-52, 55, 57-62, and objection to Claims 12, 13, 15, 28, 29, 30, 44, 45, 47, 53, 54 and 56 are expressly withdrawn and these claims, as well as previously allowed Claims 63 and 64, are therefore allowable.

### ***Allowable Subject Matter***

5. Claims 1-5, 7-18, 20-22, 25-38, 41-64 are allowed.

Claim 1 recites a color characterization method for characterizing a color imaging system, the method comprising:

obtaining first color values representing output samples of the color imaging system;

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converting the first color values into second color values in a device-independent color coordinate system using a white reference vector and a black reference vector; and  
adjusting the white reference vector using the black reference vector and first color values being converted.

Claim 8 recites a color characterization method for characterizing a color imaging system, the method comprising:

obtaining first color values representing output samples of the color imaging system;  
converting the first color values into second color values in a device-independent color coordinate system using a white reference vector and a black reference vector;  
calculating the black reference vector as a function of an output medium associated with the color imaging system;  
calculating the white reference vector using the black reference vector; and  
adjusting the white reference vector using the black reference vector and first color values being converted.

Claim 17 recites for use in characterizing a color imaging system, a color characterization arrangement comprising:

means for obtaining first color values representing output samples of the color imaging system;

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means for converting the first color values into second color values in a device-independent color coordinate system using a white reference vector and a black reference vector; and adjusting the white reference vector using the black reference vector and first color values being converted.

Claim 18 recites for use in characterizing a color imaging system, a color characterization arrangement comprising:

a computer arrangement, configured and arranged to receive first color values in a color coordinate system, the first color values representing output samples of the color imaging system; and a first memory, responsive to the computer arrangement and configured and arranged to store second color values in a device-independent color coordinate system; the computer arrangement being further configured and arranged to convert the first color values into the second color values using a white reference vector and a black reference vector, and to adjust the white reference vector using the black reference vector and first color values being converted.

Claim 34 recites for use in characterizing a color imaging system, a data storage medium storing computer-executing program configured and arranged to, when executed, obtain first color values representing output samples of the color imaging system; convert the first color values into second color values in a device-independent color coordinate system using a white reference vector and a black reference vector; and adjust the white reference vector using the black reference vector and first color values being converted.

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Claim 49 recites a color transformation method for performing a color transformation between first and second color imaging systems, the color transformation method comprising generating first and second color values respectively representing output samples of the first and second color imaging systems;

converting the first and second color values respectively into third and fourth color values using a device-independent color coordinate system;

calculating a black reference vector from a medium on which the output samples are formed and a white reference vector from the black reference vector;

adjusting the white reference vector using the first and second color values being converted; and

generating color transformation values using the third and fourth color values.

Claim 57 recites for use in performing a color transformation between first and second color imaging systems, a color transformation arrangement comprising:

means for obtaining first color values representing output samples of the second color imaging system;

means for generating second color values representing output samples of the first and second color imaging systems;

means for converting the first second color values into third color values using a device-independent color coordinate system;

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means for converting the second color values into fourth color values using the color coordinate system;

means for calculating a black reference vector from a medium on which the output samples are formed and a white reference vector from the black reference vector;

means for adjusting the white reference vector using the first and second color values being converted; and

means for generating color transformation values using the third and fourth color values.

Claim 58 recites a method for characterizing a color imaging system, the method comprising:

obtaining first color values representing output of the system;

converting the first color values into second color values using a white reference vector for the system; and

adjusting the white reference vector as a function of both a black reference vector for the system and the first color values being converted.

The combination of features identified in Claims 1, 8, 17, 18, 34, 49, 57 and 58 are neither disclosed nor suggested by the prior arts of record.

Given claims 2-5 and 7 depend from Claim 1, they are allowable by reason of their dependence.

Given claims 9-16 depend from Claim 8, they are allowable by reason of their dependence.



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Given claims 20-22 and 25-33 depend from Claim 18, they are allowable by reason of their dependence.

Given claims 35-38 and 41-48 depend from Claim 34, they are allowable by reason of their dependence.

Given claims 50-56 depend from Claim 49, they are allowable by reason of their dependence.

Given claims 59-62 depend from Claim 58, they are allowable by reason of their dependence.

Claims 63 and 64 are allowed based on the reason for allowance indicated in previously submitted Office Action (Paper NO. 10).

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Other prior art cited***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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U.S. Patent 5,398,119 to Suzuki et al is cited for photoelectric conversion devices shading correction circuit. The shading correction includes a black level correction and a white level correction.

U.S. Patent 5,485,288 to Kamei et al is cited for an image processing apparatus for converting a color image into a pattern image. The apparatus comprises a black correction/white correction unit for performing black and white adjustment for outputting a black and white image for an input color image.

***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438.

The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached at (703)308-6604.

**Any response to this action should be mailed to:**

Assistant Commissioner for Patents  
Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, or (703) 308-9052 (for *formal* communications; please mark  
"EXPEDITED PROCEDURE")

**or:**

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(703) 306-5406 (for *informal* or *draft* communications, please label  
"PROPOSED" or "DRAFT")

**Hand delivered responses** should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to  
the Group Receptionist whose telephone number is (703)305-3900.



Mehrdad Dastouri  
Patent Examiner  
Group Art Unit 2723  
September 27, 1999



Jon Chang  
Primary Examiner